PostgreSQL 17 Installation Guide (Windows & macOS)

For Training Participants – Mandatory Pre-Requisite

🎯 Objective

Before the training starts, you must:

✅ Install **PostgreSQL 17**

✅ Verify **psql** (CLI) access

✅ Verify **pgAdmin 4** access

✅ Download **Pagila** sample dataset

✅ Confirm **local connectivity**

⚠️ **Note:** No installation time will be provided during training.

1️⃣ Install PostgreSQL 17

🔷 A. Windows Installation (PostgreSQL 17)

Step 1: Download Installer

1. Open browser
2. Go to:

   👉 https://www.postgresql.org/download/windows/

3. Click **Download the installer**
4. Choose **PostgreSQL 17 (64-bit)**

Step 2: Run Installer

During installation, select:

- ✅ PostgreSQL Server

- ✅ pgAdmin 4
- ✅ Command Line Tools (includes psql)
- ⬜ Stack Builder (optional)

Step 3: Set Password

- Set a password for **postgres** superuser
- **Remember this password** (will be used in training)

Step 4: Default Settings

- Port: **5432** (keep default)
- Locale: Default
- Data directory: Default is fine

Step 5: Finish Installation

After completion, PostgreSQL service should start automatically.

🔷 **B. macOS Installation (Intel / Apple Silicon)**

Option 1 (Recommended): Homebrew

Step 1: Install Homebrew (if not installed)

```
/bin/bash -c "$(curl -fsSL
https://raw.githubusercontent.com/Homebrew/install/HEAD/instal
l.sh)"
```

Step 2: Install PostgreSQL 17

```
brew update
brew install postgresql@17
brew services start postgresql@17
```

Step 3: Verify Server Status

```
brew services list
```

PostgreSQL 17 should show as **started**.

Option 2: macOS Installer (GUI)

1. Go to:

   👉 https://www.postgresql.org/download/macosx/

2. Download **PostgreSQL 17**
3. Install with defaults
4. Set **postgres** password
5. pgAdmin will be installed automatically

2️⃣ Verify psql (Command Line Tool)

🔷 Windows

1. Open **Command Prompt / PowerShell**
2. Run:

```
psql --version
```

✅ Expected output:

```
psql (PostgreSQL) 17.x
```

🔷 macOS

1. Open **Terminal**
2. Run:

```
psql --version
```

✅ Expected output:

```
psql (PostgreSQL) 17.x
```

🔷 Test Connection

```
psql -h localhost -p 5432 -U postgres
```

Enter the password you created.

✅ Successful connection shows:

```
postgres=#
```

Exit using:

```
\q
```

3️⃣ Verify pgAdmin 4 Access

🔷 Launch pgAdmin

- **Windows:** Start Menu → pgAdmin 4
- **macOS:** Applications → pgAdmin 4

🔷 First-Time Setup

- Create **Master Password** (any password is fine)

🔷 Register Local PostgreSQL Server

1. Right-click **Servers → Create → Server**
2. **General Tab**
   - Name: Local PostgreSQL 17
3. **Connection Tab**
   - Host: localhost
   - Port: 5432
   - Maintenance DB: postgres
   - Username: postgres
   - Password: *(your postgres password)*
4. Click **Save**

✅ You should see databases under the server.

4️⃣ Download Pagila Sample Dataset

Pagila is used for **query tuning, indexing, MVCC, and performance labs**.

🔷 Download Steps

1. Open browser
2. Go to:

   👉 https://github.com/devrimgunduz/pagila

3. Download the following files:
   - pagila-schema.sql
   - pagila-data.sql

📁 Save them in a folder like:

- C:\pagila\ (Windows)
- ~/pagila/ (macOS)

5️⃣ Confirm Local Connectivity (Final Check)

🔷 Step 1: Create Test Database

```
psql -U postgres
CREATE DATABASE testdb;
\c testdb
```

🔷 Step 2: Create Test Table

```
CREATE TABLE connectivity_test (
    id SERIAL PRIMARY KEY,
    created_at TIMESTAMP DEFAULT now()
);
```

🔷 Step 3: Insert & Query

```
INSERT INTO connectivity_test DEFAULT VALUES;
SELECT * FROM connectivity_test;
```

✅ If this works, your setup is **complete**.

Exit:

```
\q
```

✅ Pre-Training Readiness Checklist

Before Day 1, ensure:

- PostgreSQL **17.x** installed
- psql --version works
- pgAdmin connects to localhost
- Pagila files downloaded
- Can create database & table locally

📌 Important Notes for Fidelity Participants

- Same tools (psql, pgAdmin) are used to connect to **AWS RDS PostgreSQL**
- Architecture & performance concepts remain identical
- No OS-level access is required during training
